



A.D. 1851 . . . . . N<sup>o</sup> 13,842.

S P E C I F I C A T I O N

OF

JAMES THOMPSON  
AND  
FREDERICK ALTREE.

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HEATING OVENS.

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LONDON.

PRINTED BY GEORGE E. EYRE AND WILLIAM SPOTTISWOODE,  
PRINTERS TO THE QUEEN'S MOST EXCELLENT MAJESTY :

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1857.





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THOMPSON AND ALTREE'S SPECIFICATION.

TO ALL TO WHOM THESE PRESENTS SHALL COME, I, FREDERICK ALTREE, of Compton Street, Brunswick Square, in the County of Middlesex, Baker, send greeting.

WHEREAS Her most Excellent Majesty Queen Victoria, by Her Letters  
5 Patent under the Great Seal of the United Kingdom of Great Britain and  
Ireland, bearing date at Westminster, the Fifth day of December, in the  
fifteenth year of Her reign, did, for Herself, Her heirs and successors, give  
and grant unto James Thompson, of Compton Street, Brunswick Square, afore-  
said, and the said Frederic Altree, Her especial licence, that the said James  
10 Thompson and the said Frederick Altree, their exors, admors, and assigns, or  
such other as the said James Thompson and the said Frederic Altree, their  
exors, admors, and assigns, should at any time agree with, and no others, from  
time to time and at all times during the term of years therein expressed,  
should and lawfully might make, use, exercise, and vend, within England,  
15 Wales, and the Town of Berwick-upon-Tweed, our Invention "FOR CERTAIN  
IMPROVEMENTS IN THE MEANS OF AND APPARATUS FOR HEATING OVENS;" in which  
said Letters Patent there is contained a proviso obliging them, or either of  
them, the said James Thompson and Frederick Altree, by an instrument in  
writing under their or either of their hands and seals, particularly to describe  
20 and ascertain the nature of their said Invention, and in what manner the same



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*Thompson & Altree's Improvements in Apparatus for Heating Ovens.*

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is to be performed, and to cause the same to be enrolled in Her Majesty's High Court of Chancery within six calendar months next and immediately after the date of the said recited Letters Patent, as in and by the same, reference being thereunto had, will more fully and at large appear.

**NOW KNOW YE**, that in compliance with the said proviso, I, the said 5 Frederick Altree do hereby declare that the nature of the said Invention, and the manner in which the same is to be performed, are described and ascertained by the Drawing in the margin hereof, and the words following, that is to say:—

I declare and describe the nature of my aforesaid Invention, and the 10 manner in which I perform the same, to be as follows:—The annexed Drawing represents a sectional elevation of an ordinary baker's oven, to be heated with gas instead of coal, &c. ; the common coal gas is to be conveyed from the main through the pipe *a, a*, to or near the extremity or further end of such oven, where it is to be ignited and consumed from a fan-tail or any 15 other description of burner affixed the feed pipe *a, a* ; this pipe passes through the centre of another of suitable capacity or diameter marked *b, b*, which is to supply the requisite quantity or volume of atmospheric air for the perfect combustion of the gas so employed, and such supply of air may be regulated by a register or valve at the end *c, c*, where the air is admitted ; the heated gases 20 arising from such combustion are to be retained in the said oven by a damper in the front (as usual) until all the available caloric has been communicated or absorbed by the brickwork, &c., of the oven ; when the proper temperature has been acquired, the pipes *a* and *b* are to be withdrawn, the gas pipe *a* being connected with the mains by an union joint for that purpose. In certain 25 localities where common coal gas is not available, I employ naphtha, or any other combustible fluid applied in efficient lamps or burners for this purpose.

And I claim as my Invention the heating of ovens, &c., internally from the caloric evolved by the combustion of gases.

In witness whereof, I, the said Frederick Altree, have hereunto set my 30 hand and seal, this Fifth day of June, in the year of our Lord One thousand eight hundred and fifty-two.

FREDERICK (L.S.) ALTREE,

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*Thompson & Altree's Improvements in Apparatus for Heating Ovens.*

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AND BE IT REMEMBERED, that on the Fifth day of June, in the year of our Lord 1852, the aforesaid Frederick Altree came before our said Lady the Queen in Her Chancery, and acknowledged the Specification aforesaid, and all and every thing therein contained and specified, in form 5 above written. And also the Specification aforesaid was stamped according to the tenor of the Statute made for that purpose.

Enrolled the Fifth day of June, in the year of our Lord One thousand eight hundred and fifty-two.

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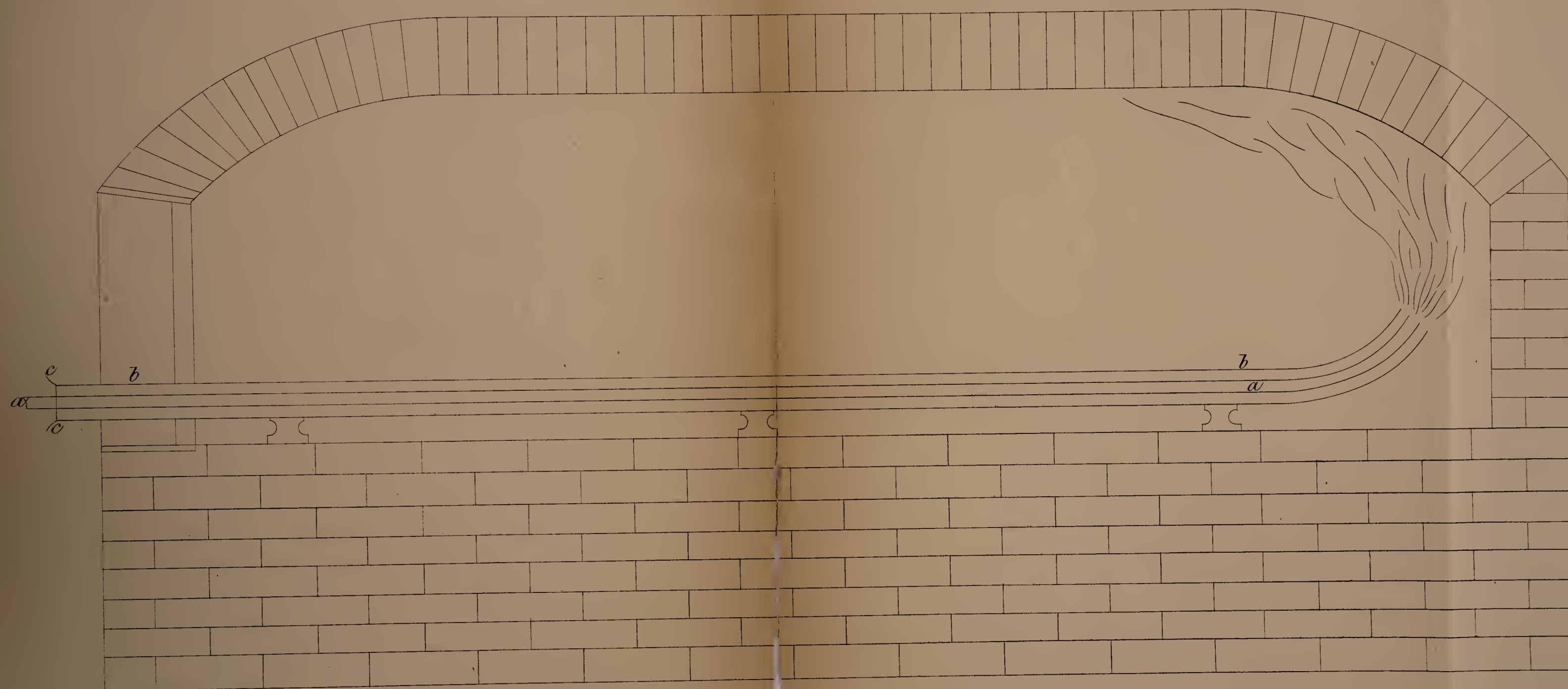
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A. D. 1851, DEC. 5. N° 13,842.  
THOMPSON & ALTREE'S SPECIFICATION.



*The enrolled drawing is not colored.*

Drawn on Stone by Malby & Sons

